

ABSTRACT

A endovascular graft having sensing devices attached thereto to facilitate measurement of pertinent parameters within the vasculature into which the graft is implanted. Power sources and transmitters may be attached to the graft to facilitate transmission of measurements to a receiving device outside the patient's body. The sensing devices, may be electrically passive or integrated devices with measurement and transmission capability. The sensing devices may be attached to specific locations on the graft material or attached to the lumen, thereby providing pertinent parameters from critical points inside the vasculature, or may be dispersed over the surface of the graft material or within the lumen to provide a profile of pertinent parameters. The sensing devices may be attached to the graft material with one or two sutures using a running stitch to minimize graft bulk and may be coated with a material to inhibit or control tissue growth. Methods and apparatus for handling and protecting sensing devices can be employed where the sensing device is particularly fragile. Approaches for effectively and efficiently attaching sensing and other devices to medical devices can also be utilized and are described.